

NEW INFORMATION ON AUSTRALIAN ANKYLOPTERYX
BRAUER AND BRINCKOCHRYSA TJEDER
(NEUROPTERA: CHRYSOPIDAE)

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Abstract

The distribution of Australian species of *Ankylopteryx* Brauer and *Brinckochrysa* Tjeder are discussed with new distribution records for *A. basalis* Kimmins, *A. pallida* Banks, *A. rieki* New, *B. cardaleae* (New) and *B. scelestes* (Banks). *B. scelestes* is recorded from the Torres Strait region for the first time. The female genitalia of *A. basalis* Kimmins and male genitalia of *A. rieki* New are described and figured.

Introduction

The palaeotropical genus *Ankylopteryx* Brauer is represented in Australia by *A. basalis* Kimmins, *A. immaculata* Brauer, *A. pallida* Banks, *A. rieki* New and *A. (Sencera) scioneura* Navás (Brooks and Barnard 1990). *Brinckochrysa* Tjeder previously was represented in Australia by only one species, *B. cardaleae* (New) (New 1983). *B. scelestes* (Banks), a species widely distributed throughout the western Pacific, is recorded here for the first time from the Torres Strait region.

The Australian species of *Ankylopteryx* and *Brinckochrysa* have been poorly studied with relatively few collection records. The immature stages are unknown and little biological information is available on either genus (Brooks and Barnard 1990), although a putative larva of *B. scelestes* from Micronesia was figured by Adams (1959).

A. basalis and *A. rieki* are known only from type series collected in northern Queensland. The male genitalia of *A. basalis* were figured by Kimmins (1952) and New (1980), but the female genitalia are unknown. Conversely, the female genitalia of *A. rieki* were described and figured by New (1980), with the male genitalia unknown. The female and male genitalia of *A. basalis* and *A. rieki* respectively, are described and figured here.

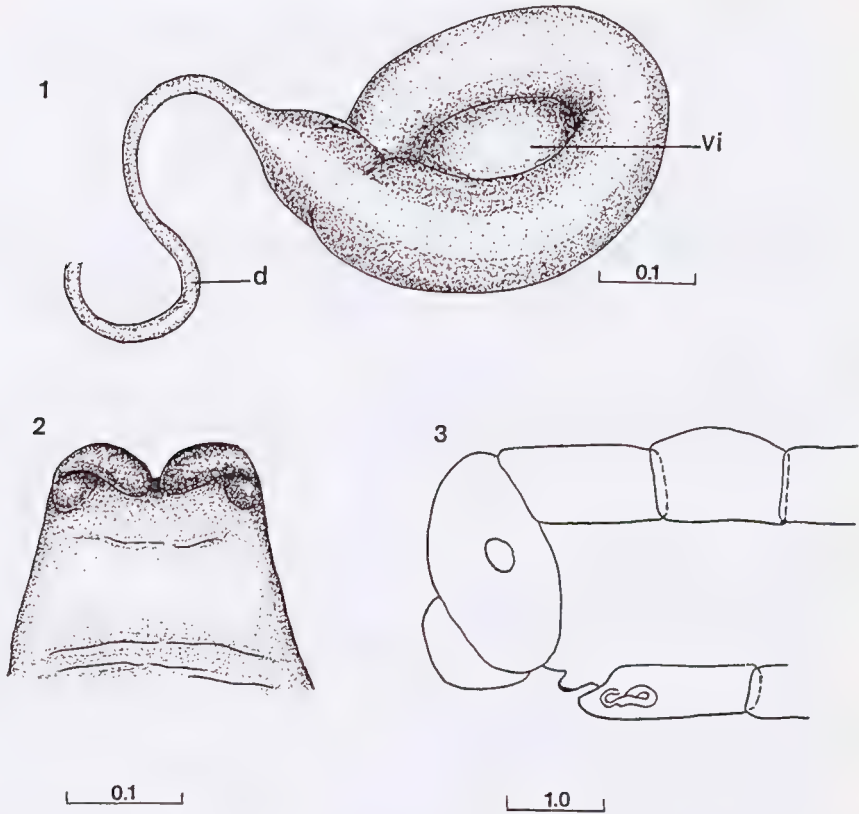
Notes on the distribution of Australian *Ankylopteryx* and *Brinckochrysa* are presented with new distribution records for *A. basalis*, *A. pallida*, *A. rieki*, *B. cardaleae* and *B. scelestes*. Abbreviations: QM, Queensland Museum; LPL, CSIRO Div. of Entomology, Long Pocket Laboratories; QDPI, Queensland Department of Primary Industries, Indooroopilly.

Ankylopteryx basalis Kimmins

(Figs 1-3)

Material examined. NORTHERN TERRITORY: 1 ♀, Berrimah, Darwin, Oct. 1993, V. Brancatini (LPL).

Description of female. Forewing length: 9 mm. Body markings and morphology as per male description (Kimmins 1952). Terminalia (Fig. 3):



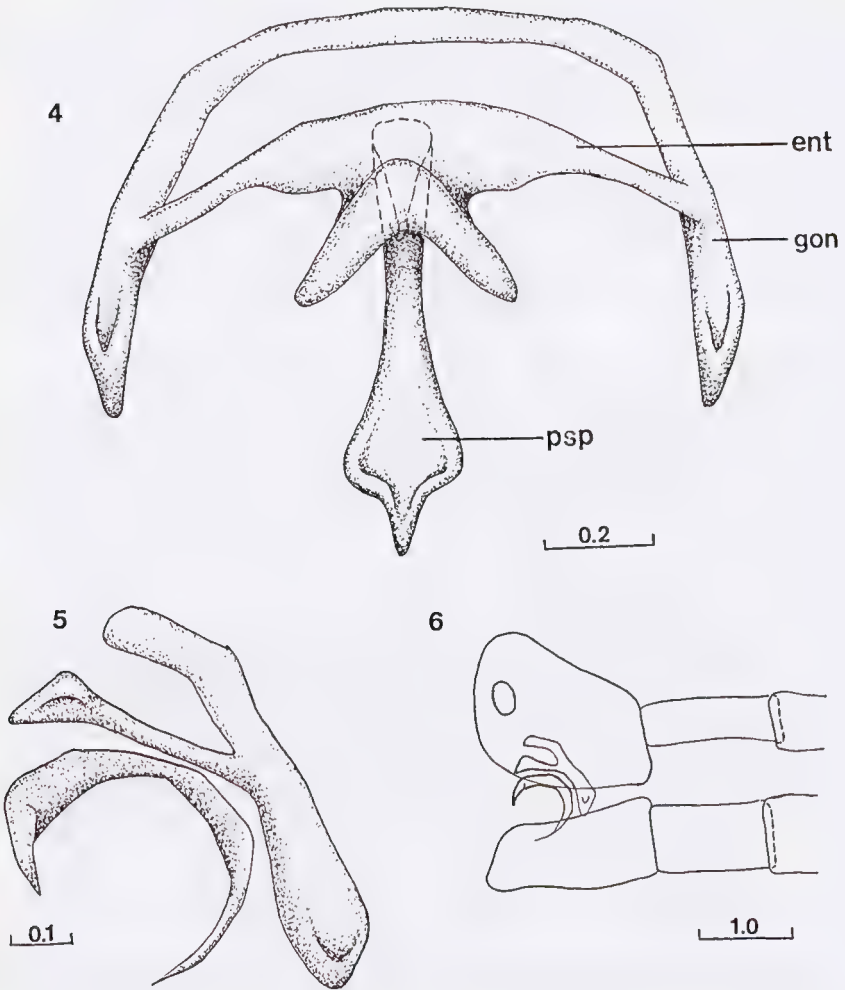
Figs 1-3. *A. basalis* Kimmins; female: (1) spermatheca, ventral; (2) subgenitale, ventral; (3) apex of abdomen indicating position of genitalia. Abbreviations: vi, ventral impression; d, spermathecal duct. Scale bar in millimetres.

Abdomen with long, sparsely distributed setae. Tergite VII dome shaped. Sternite VIII+IX shallow, quadrangular; posterior margin projected medially, apex rounded with a dense group of short, dark setae. Tergite IX+ectoproct rounded; trichobothrial field small, oval shaped with ca. 24 trichobothria. Gonapophysis laterale globular, directed postero-ventrally. Genitalia: Subgenitale (Fig. 2) bilobed; lobes partially sclerotized. Spermatheca (Fig. 1) ovoid; vela small; ventral impression large, shallow; spermathecal duct sinuous, thickened basally.

Ankylopteryx rieki New

(Figs 4-6)

Material examined. QUEENSLAND: 1 ♂, Bundaberg, 6.xii.1929, anon. (QM); 2 ♂♂, The Boulders, Babinda, 20.ii.1995, M. Coombs (LPL); 1 ♂,



Figs 4-6. *A. rieki* New; male: (4) genitalia, postero-dorsal; (5) genitalia, lateral; (6) apex of abdomen indicating position of genitalia. Abbreviations: gon, gonarcus; ent, entoprocessus; psp, pseudopenis. Scale bar in millimetres.

Innisfail, 21.ii.1995, Les Ring (LPL); 1 ♂, Tully, 22.ii.1995, M. Coombs (LPL).

Description of male. Forewing length: 10 mm. Body markings and morphology as per female description (New 1980). Terminalia (Fig. 6): Abdomen with long, sparsely distributed setae. Tergite IX+ectoproct rounded posteriorly. Sternite VIII+IX quadrangular, apex rounded posteriorly with dense setae; trichobothrial field round, ca. 25 trichobothria. Genitalia (Figs

4, 5) pseudopenis slender, reflexed ventrally, apex pointed, arched with preapical region broad, spatulate; gonarcus transverse, arcuate, lateral arms broad, flattened; entoprocessus transverse, fused distally with a distinct bilobed, median projection directed posteriorly over apex of pseudopenis.

***Ankylopteryx pallida* Banks**

Material examined. QUEENSLAND: 1 (sex indeterminate), Imbil, Nov. 1941, J.B. O'Keefe (QM); 1 ♀, Upper Boulder Ck., 11 km Nth Tully, 5-7.xii.1989, Monteith, Thompson, Janetski (QM); 3 ♂♂, 13.iii.1994, Brisbane, 1993, S. Winterton (LPL). NEW SOUTH WALES: 1 ♀, 17.ix.1994, Alstonville, S. Winterton (as larva in macadamia orchard) (LPL).

Distribution and Biology of the Australian *Ankylopteryx*

All Australian species of *Ankylopteryx* are endemic (Fig. 7), with all but *A. immaculata* recorded from tropical northern Australia. The genus has not been recorded from Papua New Guinea (New 1983). The record of *A. immaculata* from Tasmania was considered dubious by New (1983) and may have been mistaken for an individual of *Nothancyla verreauxi* Navás. *A. pallida* has a disjunct, coastal distribution in eastern Australia and is sometimes common in humid, densely forested areas in south-eastern Queensland during early autumn (unpublished data). *A. basalis* was described by Kimmins (1952) from Halifax (northern Queensland). A female allotype was listed in the type series by New (1980), but the abdomen is detached and glued on the cork staging the pinned specimen. Thus the genitalia were not examined by New because of the risk of further damage (New, pers. comm.). The female holotype and paratype of *A. rieki* were described by New (1980) from northern Queensland and a male is recorded here from Bundaberg (central Queensland). The record of *A.(S.) scioneura* from Australia is obscure and remains unconfirmed (New 1980).

These new collection records conform with the apparent tropical distribution of this genus.

The female *A. basalis* recorded here from Darwin (Northern Territory) was collected as a larva feeding on *Icerya aegyptiaca* (Douglas). Larvae of both *A. basalis* and *A. pallida* (specimen from Alstonville listed above) are trash carriers.

***Brinckochrysa cardaleae* (New)**

Material examined. QUEENSLAND: 1 ♂, Charleville, 10.ix.1920, anon. (QM).

***Brinckochrysa scelestes* (Banks)**

Material examined. QUEENSLAND: 2 ♂♂, Murray Is. (Torres Strait), 12.x.1930, F.W. Moorhouse (QM); 1 ♂, Thursday Is. (Torres Strait), 18.x.1982, at light, J.W. Turner (QDPI).



Fig. 7. Distributions of *A. basalis* (▲), *A. pallida* (□), *A. rieki* (■), *B. cardaleae* (○) and *B. scelestes* (●) (modified after New 1980, 1983).

Distribution of *Brinckochrysa cardaleae* and *B. scelestes*

The genus *Brinckochrysa* is poorly represented in Australia and is probably a relatively recent adventive from the Afrotropical/Oriental region where it is well distributed (16 species) (Brooks and Barnard 1990). New (1980) described *B. cardaleae* from the Northern Territory and north-western Queensland. It is recorded here from Charleville in southern Queensland. A feature of the apparent distribution of this species is that despite the relative scarcity of specimens collected, all records are from inland north-eastern Australia with none from coastal areas. This is in contrast to the majority of Australian Chrysopidae, with distributions predominantly in the wetter coastal regions (New 1983).

B. scelestes is distributed throughout Micronesia, south-eastern Asia, India and Japan (Adams 1959; Tsukaguchi 1985) and is recorded here from Murray and Thursday Islands (Torres Strait). These new records for *B. cardaleae* and *B. scelestes* represent the most southern distribution records for both species (Fig. 7).

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